

REMARKS

[0001] Applicant's attorney respectfully requests reconsideration and allowance of all of the claims of the application. Claims 1-12 and 24-27 are presently pending. Claim 2 is amended herein. Claims 24-27 are added herein as new.

Formal Request for an Interview

[0002] If the Examiner's reply to this communication is anything other than allowance of all pending claims, then I formally request an interview with the Examiner. I encourage the Examiner to call me—the undersigned representative for the Applicant—so that we can talk about this matter so as to resolve any outstanding issues quickly and efficiently over the phone.

[0003] Please contact me to schedule a date and time for a telephone interview that is most convenient for both of us. While email works great for me, I welcome your call as well. My contact information may be found on the last page of this response.

Allowable Subject Matter

[0004] Applicant would like to thank the Examiner for allowing claim 2. This claim has been amended herein to be in independent form, and therefore is now allowable.

Substantive Matters

Claim Rejections under § 103

[0005] The Examiner rejects claims 1 and 3-12 under § 103. For the reasons set forth below, the Examiner has not made a prima facie case showing that the rejected claims are obvious.

[0006] Accordingly, Applicant's attorney respectfully requests that the § 103 rejections be withdrawn and the case be passed along to issuance.

[0007] The Examiner's rejections are based upon the following references alone and in combination:

- **Japanese Patent No. JP61-266069 to Masahiro et al:** "*Masahiro*" hereinafter, (issued November 25, 1986); and
- **US Patent No. 6,529,363 to Waffenschmidt et al:** "*Waffenschmidt*" hereinafter, (published March 4, 2003).

Obviousness Rejections

Lack of *Prima Facie* Case of Obviousness (MPEP § 2142)

[0008] Applicant disagrees with the Examiner's obviousness rejections. Arguments presented herein point to various aspects of the record to demonstrate that all of the criteria set forth for making a *prima facie* case have not been met. To establish *prima facie* obviousness of a claimed invention, all of the claim recitations must be taught or suggested by the prior art¹ and "all words in a claim must be considered in judging the patentability of that claim against the prior art."² Further, if prior art, in any material respect teaches away from the claimed invention, the art cannot be used to support an obviousness rejection.³ Moreover, if a modification would render a reference unsatisfactory for its intended purpose, the suggested modification / combination is impermissible.⁴

Based upon *AAPA* and *Masahiro*

[0009] The Examiner rejects claims 1, 4, and 6-10 under 35 U.S.C. § 103(a) as being unpatentable over *AAPA* and *Masahiro*. Applicant's attorney respectfully traverses the rejection of these claims and asks the Examiner to withdraw the rejection of these claims.

¹ *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)

² *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)

³ *In re Geisler*, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed Cir. 1997)

⁴ See MPEP § 2143.01

Independent Claim 1

[0010] Applicant's attorney submits that the combination of *AAPA* and *Masahiro* does not teach or suggest at least the following elements as recited in this claim. In specific, claim 1 recites a common mode line connected in series with a capacitor such that the $\lambda/4$ lengths of the [common mode] sections being chosen to correspond to a central frequency greater than a desired central frequency for the transformer.

[0011] For example, referring, e.g., to FIG. 3 and paragraphs 26-30 of the present application, a mode-switching transformer 10 comprises a first line (sections 5' and 6') in common mode and a second line (sections 7' and 8' and junction point 9) in differential mode, wherein the common mode line is connected in series with a capacitor C. Because the capacitor C is specifically used to lower the central frequency of the bandwidth of the transformer, the sections 5', 6', 7', 8' may be sized for higher operating frequencies. As a result, the sections 5', 6', 7', 8' may be shorter in length, and thus, the size of the transformer and the insertion losses may be reduced. Thus, the capacitance of the capacitor affects the length of common mode windings and vice versa.

[0012] The Examiner correctly acknowledges that *AAPA* does not teach anything with respect to a capacitor. However, *Masahiro* also does not provide any teaching of a capacitor coupled to a common mode winding such that the length of the common mode winding corresponds to the value of the capacitor as recited in claim 1. At best, *Masahiro* shows at least two capacitors 30 and 40 coupled to primary windings 21/23. Furthermore, the primary windings 21/23 do

not match up with secondary windings 22 at a one for one basis. Therefore, *Masahiro* cannot possibly have a central frequency corresponding to the transformer as there is no manner in which any winding may be coupled to differential mode. To then suggest that the capacitor that is merely attached to some winding of a transformer is done so for the purpose of reducing the central frequency of the transformer is simply nonsensical. No prior art of record teaches or even suggests wherein the common mode line is connected in series with a capacitor, to lower a central frequency of a bandwidth of the transformer as recited in claim 1.

[0013] Additionally, the teachings of *Masahiro* are clearly directed to a switching power converter. As is well known in the art, a switching power converter is very different from that of a mode switching transformer (balun) as recited in claim 1. One purpose of a balun is to convert differential mode signals into common mode signals and conversely. Quite differently, a switching power source, such as that of *Masahiro*, is a DC-DC converter for power supply purposes. This is further evidenced by the fact that the capacitor 30 of *Masahiro* illustrates a parasitic capacitance of the collector of the switching transistor (4). This parasitic capacitance is cancelled by the effect of capacitor (40) inserted by *Masahiro* to reduce the common mode noise.

[0014] Moreover, Applicant's attorney submits that the Examiner is using hindsight reasoning. Without any specific teaching in *Masahiro* about common mode windings, differential windings or central frequencies, it stands to reason that *Masahiro* uses its capacitor for entirely different reasons, *i.e.*, to reduce common-mode noise. Reducing common mode noise is not a concern of the

recitations of claim 1 and this is evidence that the Examiner is using hindsight reasoning. As a matter of law, obviousness may not be established using hindsight obtained in view of the teachings or suggestions of the applicants.¹ To guard against the use of such impermissible hindsight, obviousness needs to be determined by ascertaining whether the applicable prior art contains any suggestion or motivation for making the modifications in the design of the prior art article in order to produce the claimed design. The mere possibility that a prior art teaching could be modified or combined such that its use would lead to the particular limitations recited in a claim does not make the recited limitation obvious, unless the prior art suggests the desirability of such a modification.²

[0015] As shown above, the combination of *AAPA* and *Masahiro* does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant's attorney asks the Examiner to withdraw the rejection of this claim.

Dependent Claims 4 and 6

[0016] These claims ultimately depend upon independent claim 1. As discussed above, claim 1 is allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, some or all of these claims may also be allowable for additional independent reasons.

¹ *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1551, 1553, 220 USPQ 303, 311, 312-13 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

² See *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

Independent Claim 7

[0017] Applicant's attorney submits that the combination of *AAPA* and *Masahiro*, does not teach or suggest at least the following elements as recited in this claim. The Examiner correctly acknowledges that *AAPA* does not teach a capacitor as recited in this claim. Applicant's attorney submits that *Masahiro* also does not remedy these deficient teachings for at least similar reasons as discussed above with respect to claim 1. For at least similar reasons, Applicant's attorney submits that no permissible combination of the prior art of record teaches or suggests the recitations of this claim. Accordingly, Applicant's attorney asks the Examiner to withdraw the rejection of this claim.

Dependent Claims 8-10

[0018] These claims ultimately depend upon independent claim 7. As discussed above, claim 7 is allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, some or all of these claims may also be allowable for additional independent reasons.

Based upon *AAPA*, *Masahiro* and *Wafenschmidt*

[0019] The Examiner rejects claims 3, 5, and 11-12 under 35 U.S.C. § 103(a) as being unpatentable over *AAPA*, *Masahiro* and *Waffenschmidt*. Applicant's attorney respectfully traverses the rejection of these claims and asks the Examiner to withdraw the rejection of these claims.

Dependent Claims 3, 5 and 11-12

[0020] These claims ultimately depend upon one of independent claims 1 or 7. As discussed above, claims 1 and 7 are allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, some or all of these claims may also be allowable for additional independent reasons.

Conclusion

[0021] All pending claims are in condition for allowance. Applicant's attorney respectfully requests reconsideration and prompt issuance of the application. If any issues remain that prevent issuance of this application, the **Examiner is urged to contact me before issuing a subsequent Action.** Please call or email me at your convenience.

[0022] Any additional fees required as a result of this amendment have been paid from the below-referenced deposit account as filed herewith. Should further payment be required to cover such fees you are hereby authorized to charge such payment to Deposit Account No. 07-1897.

Respectfully Submitted,

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